



DRAFT

ENVIRONMENTAL

ASSESSMENT

PARADISE ELK RANCH GAME FARM

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*Montana Department of Fish, Wildlife and Parks
Region 4
4600 Giant Springs Road
Great Falls, Montana 59406*

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SUMMARY

ENVIRONMENTAL ASSESSMENT PROPOSED PARADISE ELK RANCH GAME FARM

INTRODUCTION

The Montana Department of Fish, Wildlife and Parks (FWP) is required to perform an environmental analysis in accordance with the Montana Environmental Policy Act (MEPA) for each proposal for projects, programs, legislation, and other major actions of state government significantly affecting the quality of the human environment (Administrative Rules of Montana [ARM] 12.2.430). FWP uses environmental assessments (EAs) in the game farm licensing process to identify and evaluate environmental impacts of a proposed game farm. EAs also determine whether the impacts would be significant and whether, as a consequence, FWP would perform a more detailed environmental impact statement (EIS).

When preparing an EA, FWP reviews environmental impacts of the proposed action, impacts of the no action alternative, and impacts of other alternative actions which include recommended and/or mandatory measures to mitigate the project's impacts. A mitigated EA includes alternatives with enforceable requirements (stipulations) which reduce impacts of the proposed action. The EA may also recommend a preferred alternative for the FWP decision maker.

Based upon its review of the Paradise Elk Ranch game farm application, FWP has prepared a mitigated EA.

OBJECTIVES

This EA has been prepared to serve the following purposes in accordance with FWP MEPA rules (ARM 12.2.430):

- to ensure that FWP uses natural and social sciences in planning and decision making;
- to be used in conjunction with other agency planning and decision-making procedures to make a determination regarding the Proposed Action;
- to assist in the evaluation of reasonable alternatives and the development of conditions, stipulations, and modifications to the Proposed Action,
- to determine the need to prepare an EIS through an initial evaluation and determination of the significance of impacts associated with the Proposed Action;
- to ensure the fullest appropriate opportunity for public review and comment on the Proposed Action; and
- to examine and document the effects of the Proposed Action on the quality of the human environment.



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PUBLIC PARTICIPATION

Public involvement in the EA process includes steps to identify and address public concerns. The Draft EA will be available for public review and comment from November 17, 1997 until 5 pm December 8, 1997 from the Region 4 FWP office at the address listed below. Submit all comments regarding this EA to the same address.

Warden Sgt. Gary Benson
Fish, Wildlife and Parks
4600 Giant Springs Road
Great Falls, Montana 59406
Phone (406) 454-5850
FAX (406) 761-8477

PROPOSED ACTION AND ALTERNATIVES

PROPOSED ACTION

The FWP received a completed application August 25, 1997 from Mark E. Ayers to develop a new game farm referred to as the Paradise Elk Ranch game farm. The proposed game farm is located approximately 2 miles east of Cut Bank, in Glacier County, Montana (**Figure 1**). The Proposed Action would include placing up to 20 elk on 22 acres and may include boarding additional elk not owned by the business at the proposed site. The number of game farm animals on the site, including boarded elk, would not exceed 20.

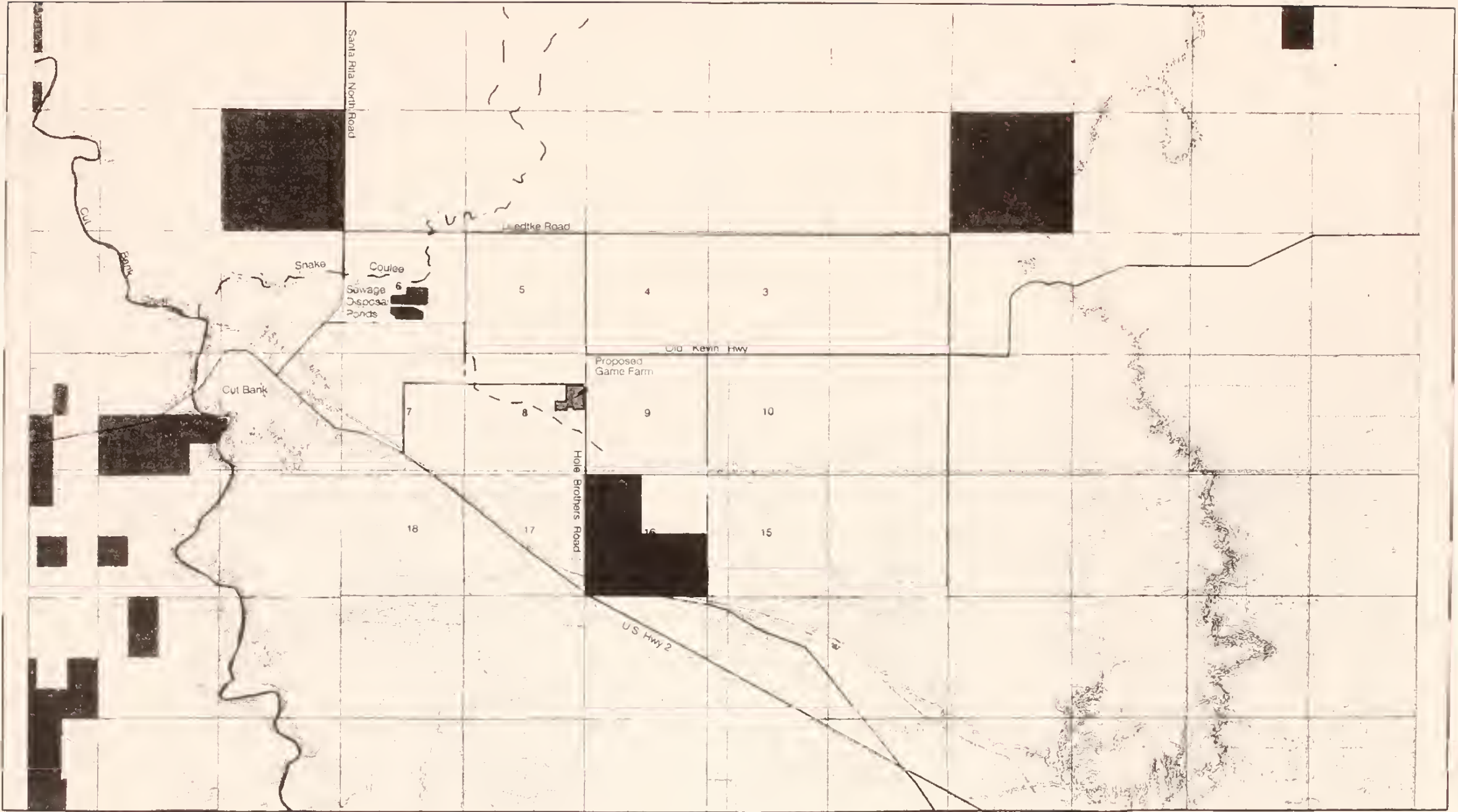
The applicant would breed, sell, and dispose of domestic elk in accordance with Montana game farm and disease control requirements stipulated in Montana statute and administrative rules. Fence construction would be in accordance with requirements of FWP under ARM 12.6.1503A (**Appendix A**) unless a waiver is granted by FWP to construct a game-proof fence of an alternative design. The quarantine plan for the proposed game farm consists of using the approved quarantine facility at a separate game farm operated by the applicant, located approximately 1½ miles from the proposed site. A handling facility and holding pen would be constructed on the site to facilitate the loading of animals when movement to the quarantine facility is necessary. Transporting game farm animals from the proposed game farm to the quarantine facility would be performed in compliance with all Department of Livestock (DoL) transportation requirements.

ALTERNATIVES

One alternative (No Action Alternative) is evaluated in this EA. Under the No Action Alternative, FWP would not issue a license for the Paradise Elk Ranch game farm as proposed. Therefore, no game farm animals would be placed on the proposed game farm area. Implementation of the No Action Alternative would not preclude other activities allowed under local, state and federal laws to take place at the game farm site.

PURPOSE AND NEED OF THE PROPOSED ACTION

The purpose of the Proposed Action is to establish a new game farm site that would enclose domestic elk. The Paradise Elk Ranch game farm would be a commercial enterprise that would provide elk breeding stock to the game farm market and boarding of other domestic elk.



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■ State of Montana
 ■ Indian Lands
 - - Intermittent Stream

Note: Ownership Data Derived From
 Bureau of Land Management
 Montana Public Lands, 1:100,000
 Scale Quadrangles Source Data 1975

Site Map
 Proposed Game Farm EA
 Paradise Game Farm
 Cut Bank, Montana
 FIGURE 1

ROLE OF FWP AND THE DEPARTMENT OF LIVESTOCK

FWP is the lead agency in preparing this EA for the proposed project. This document is written in accordance with the Montana Environmental Quality Council (EQC) MEPA Handbook and FWP statutory requirements for preparing an EA under Title 75, Chapter 1, Part 2 Montana Code Annotated (MCA) and FWP rules under ARM 12.2.428 et seq.

FWP shares regulatory responsibilities for new and expanding game farms with the DoL. The DoL is responsible for regulating the health, transportation and identification of game farm animals. During the application process, all quarantine area plans and specifications are submitted to the DoL for approval and inspection of the proposed quarantine facility. No licenses are issued without such approval and inspection.

AFFECTED ENVIRONMENT

The proposed Paradise game farm is located approximately two miles east of Cut Bank, Montana in Glacier County. The current land use of the site is rangeland pasture with no active livestock grazing (**Figure 2**).

LAND RESOURCES

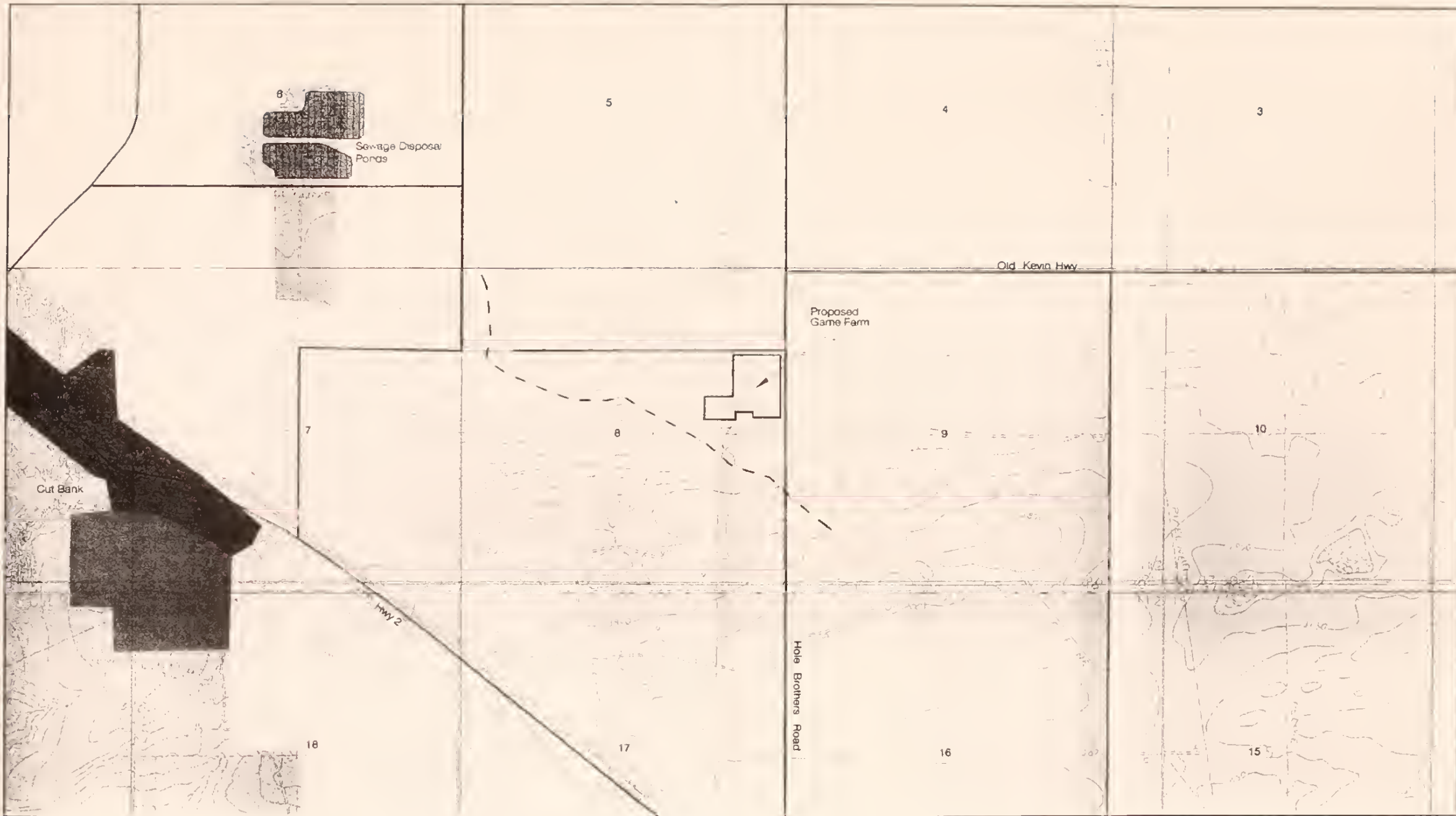
The proposed 22 acre site is situated on the gently sloping, broad upland bench surrounding the city of Cut Bank. The area is part of the glaciated Missouri River plateau and exhibits typical glaciated topography of poorly drained pothole depressions and undulating terrain. Oil and gas have historically been produced on the site and in the site vicinity, but production on the site is currently idle.

Bedrock geology of the area has been mapped as Upper Cretaceous Two Medicine Formation and is primarily composed of gray shales with minor beds of sandstone. A small outcrop of grayish brown, medium to fine-grained sandstone is present on the proposed site. Surficial geology has been mapped as glacial lake deposits that accumulated at the bottom of glacial lake Cut Bank.

Soil map units identified on the site include the Wayden clay loam, Scobey clay loam, and Linnet clay. The Wayden clay loam is present on about 50% of the proposed game farm area. Permeability in the Wayden is slow, soil reaction is mildly to moderately alkaline, and shrink-swell potential is moderate to high. The hazard of soil blowing is severe and the hazard of water erosion is moderate for the Wayden clay loam. Scobey clay loam is present on a third of the property along the east perimeter. Permeability in the Scobey is moderately slow and the soil is mildly to moderately alkaline. The hazard of wind erosion is slight and the hazard of water erosion is moderate in the Scobey clay loam. The Linnet clay is present on the remainder of the site, along the northern perimeter. Permeability of the Linnet is slow and runoff is medium. Soil reaction is mildly alkaline on the surface and subsoil but strongly alkaline below a depth of 54 inches. The hazard of water and wind erosion is moderate in the Linnet clay.

WATER RESOURCES

The major drainage in the area of the proposed game farm is Cut Bank Creek which is the principal tributary to the Marias River approximately 12 miles south of Cut Bank. The main tributaries to Cut Bank Creek are Spring Creek, Snake Coulee, Rocky Coulee, and Little Rocky Coulee. Of these drainages, only Cut Bank Creek and Snake Coulee fall within the study area shown in **Figure 1**. The Proposed Action would be located approximately three miles east (cross-gradient) of Cut Bank Creek, and approximately 1.5 miles southeast (upgradient) of Snake Coulee (**Figure 1**). Drainage is poorly developed throughout the region. Small undrained depressions, as intermittent potholes, are numerous. Cut Bank Creek, which drains an area of 1,065 square miles, originates in the mountains of Glacier National Park. Much of the spring and summer flow is derived from melting snow; fall and winter flow is sustained by groundwater discharge.



The proposed site is located on a relatively flat area in the drainage basin of Snake Coulee. An ephemeral drainage swale is located approximately 100 feet southwest of the proposed site (**Figure 2**). No drainage swale or pothole is located on the proposed site. On-site water is provided by the Cut Bank water supply system and a single irrigation well.

Four groundwater wells are located within ½-mile of the proposed game farm site, with an additional eight groundwater wells within 1 mile of the site. Nine of these wells produce from aquifers at 150 - 220 feet below ground surface, and 3 from aquifers at 50 - 125 feet below ground surface. Production rates range from 10 - 400 gallons per minute. Most of the 12 wells produce about 25 gallons per minute and are used for domestic, stock, and irrigation purposes.

VEGETATION RESOURCES

The proposed game farm includes one vegetation type: bluebunch wheatgrass/western wheatgrass. The site has historically been heavily grazed which has resulted in a patchwork of introduced and native species and the elimination of bluebunch wheatgrass. The site is characterized by 2- to 3-acre areas dominated by western wheatgrass, with lesser amounts of scarlet globemallow, prairie junegrass, thickspike wheatgrass, crested wheatgrass, hairy goldenaster, saltsage, and very sparse green needlegrass. Smaller areas are dominated by blue grama and needle-and-thread, with lesser amounts of curlycup gumweed, fringed sagewort, Hood's phlox, dotted blazingstar, and broom snakeweed. Small monocultures of smooth brome, tumbled mustard or crested wheatgrass are also present on the site. About 1 acre had been recently seeded to smooth brome and dryland alfalfa. The proposed pasture is estimated to produce approximately 7 tons/year of available forage. No sensitive plant species are located within the proposed game farm and no state listed noxious weeds were observed on the tract during the reconnaissance survey.

WILDLIFE RESOURCES

The proposed game farm is located in prairie grassland habitat and is surrounded by dryland agricultural fields (**Figure 2**). An occasional mule deer, white-tailed deer, or pronghorn antelope may pass through this area but the area does not provide sufficient habitat to sustain significant numbers of these species (**Figure 3**). It is also highly unlikely that transient elk pass through this area. There are no areas of concentrated winter deer use on or near the proposed game farm. Hungarian partridge and ring-necked pheasants, two introduced species, do occur in the vicinity of the proposed game farm. There are no Federally listed threatened and endangered wildlife species expected to occur in this area.

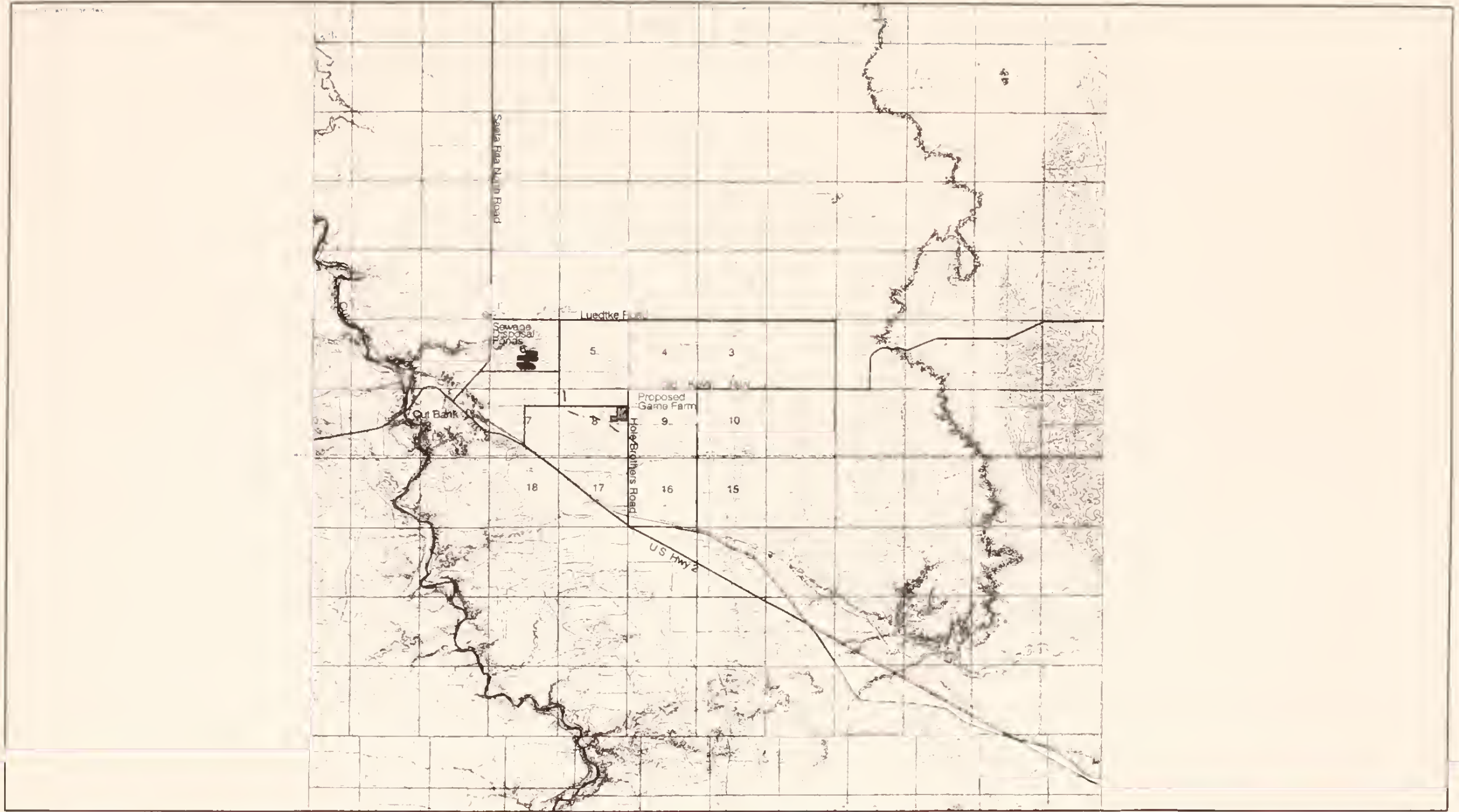
ENVIRONMENTAL CONSEQUENCES

Only resources that have potential adverse effects from the Proposed Action are summarized in this section. A detailed discussion of environmental consequences is contained in *Part II* of this EA.

LAND RESOURCES

Impacts to land resources associated with the Proposed Action are expected to be minor if a reasonable stocking rate is used. Wind erosion hazard is severe on about half of the property where Wayden soils are present. The loss of soil due to wind erosion can be reduced or eliminated by maintaining an effective vegetative cover, which is directly impacted by the stocking rate. The risk of water erosion is slight to moderate on all the property and is less likely to be a problem as a result of the gentle slopes on the proposed site.

Soil compaction may be of concern in animal concentration areas where high densities of animals result in the typical bare ground condition common to feed lot situations. Maintaining an adequate vegetative cover should effectively mitigate this impact.



Mule Deer Winter Range and Overall Distribution
 --- Intermittent Stream

Note: Wildlife Data Presented On This Map Was Derived From Information Services Unit, Montana Fish, Wildlife, and Parks Digitized At A Scale Of 1:250,000. Source Data is 1995.

Winter Range
 Proposed Game Farm EA
 Paradise Game Farm
 Cut Bank, Montana
 FIGURE 3

WATER RESOURCES

Domestic elk fecal matter and nutrient-enriched water could affect the quality of groundwater and surface water in the vicinity of the game farm, primarily during periods of snowmelt and major precipitation events.

VEGETATION RESOURCES

Forage production on the site is estimated to feed 20 elk for 1.2 months (or 4 elk for 6 months) during the first year. Unless elk stocking rate is monitored, and elk are rotated through pastures in a timely manner, the probability of degrading vegetation and soil resources is high. Degraded vegetation and soil resources would result in a decrease in vegetative productivity, changes in species composition, and a reduction in native species diversity within the pasture.

WILDLIFE RESOURCES

The 22 acre enclosure may alter local movement of some individual wild deer or pronghorn forcing them to reroute their movement around the exterior enclosure fence. However, the proposed game farm is sufficiently small and located on nearly level land that it would have minimal affect.

There is an undetermined potential of domestic elk carrying or becoming infected with a contagious wildlife disease or parasite such as tuberculosis or meningeal worm, and then coming in contact (through-the-fence, nose-to-nose, nose-to-soil, or ingress/egress) with wild deer, elk, or other wildlife. It is also possible that diseases and parasites carried by wild elk could be introduced to domestic elk with equally severe impacts. Ingress of wild elk or deer would likely result in the destruction of the trespassing animals. Spread of a contagious wildlife disease may directly or indirectly (depending upon the nature of the disease) effect the human environment by reducing the number of wild deer and elk available for hunting or exposing hunters to diseases that are contagious to humans as well. Although release of a contagious disease in the wild could severely impact native wildlife populations, the risk of disease transmission from domestic elk managed at the proposed Paradise game farm to wild elk is very low and could be minimized by routine disease surveillance of the herd.

Risk to human health from diseased animals could be significant, but routine brucellosis and tuberculosis testing requirements for game farm animals offer a measure of surveillance that minimizes that risk.

CUMULATIVE EFFECTS

The Proposed Action would not result in potential impacts that are individually minor but cumulatively considerable. Cumulative effects from past, present and reasonably foreseeable activities in all resource areas would be similar to those described for the Proposed Action.

EA CONCLUSION

MEPA and game farm statutes require FWP to conduct an environmental analysis for game farm licensing as described in the Introduction of this Summary. FWP prepares EAs to determine whether a project would have a significant effect on the environment. If FWP determines that a project would have a significant impact that could not be mitigated to less than significant, the FWP would prepare a more detailed EIS before making a decision.

Based on the criteria evaluated in this EA, an EIS would not be required for the proposed Paradise Elk Ranch game farm. The appropriate level of analysis for the Proposed Action is an EA because all impacts of the Proposed Action have been accurately identified in the EA, and all identified impacts have a minor affect on the environment.

MITIGATION MEASURES

The mitigation measures described in this section address impacts identified in the EA.

REQUIRED STIPULATIONS

The following stipulation is designed to mitigate significant impacts identified in the EA to below the level of significance:

Report the ingress of any wild game animals or egress of domestic elk to FWP immediately. The report must contain the probable reason why or how ingress/egress was achieved.

This stipulation is imposed to mitigate risks to wildlife health posed by the proposed game farm.

The information provided by the stipulation would help both the applicant and FWP to address ingress and egress incidents and to minimize contact between wild and domestic animals. This stipulation, in addition to existing FWP fencing and wildlife protection requirements, would effectively reduce the risk to wildlife health to below significant.

RECOMMENDED MITIGATION MEASURES:

The following mitigation measures address additional impacts identified in the EA that are likely to result from the Proposed Action.

Land Resources

Maintain a reasonable stocking rate within the game farm enclosure to minimize changes in soil structure, minimize potential increases in runoff and minimize water and wind erosion from disturbed ground. A reasonable stocking rate is defined under *EA Definitions*, Part II of the Environmental Review.

Air Resources

Employ the following mitigation measures to reduce odor problems if they occur:

- Create a buffer zone between waste management areas and neighbors considering wind direction and timing when moving waste.
- If waste is land-applied, incorporate waste into soil quickly by plowing or discing and spread waste during cool weather or in the morning during warm, dry weather.
- Carcasses of animals buried on the game farm must be covered with a minimum of two feet of soil. Carcasses may also be sent to a licensed municipal landfill if approved by the landfill operator. Carcasses can not be disposed of in water bodies, roads, or ditches.

Water Resources

Maintain vegetative cover in the pastures to reduce sediment load and contaminants in surface water runoff.

Vegetation Resources

Effects on vegetation from the Proposed Action can be mitigated by using the following measures:

- Stock elk at a rate which would preserve the vegetative resource and soil integrity over time. A reasonable stocking rate is defined under *EA Definitions*, Part II of this Environmental Review.
- Establish a rotational grazing system.
- Feed only hay produced locally, or certified weed seed free hay which would slow the introduction of noxious weeds not currently in the vicinity.
- Develop a weed control plan in conjunction with the Glacier County Weed Control District.

Fish and Wildlife Resources

The following standard game farm management practices would help minimize impacts to free ranging wildlife species:

- Store hay, feed, and salt away from exterior fences or buildings.
- Feed game farm animals at interior portions of the enclosure and not along the perimeter fence.
- Remove dead animals, excess fecal material, and waste feed from the game farm and place at an approved site not likely to be used by humans, and domestic animals and wild animals.
- Inspect the exterior game farm fence on a regular basis and immediately after events likely to damage the fence to insure its integrity with respect to trees, burrowing animals, predators and other game animals.
- If fence integrity or ingress/egress becomes a problem, adjustment of fence requirements to include double fencing or increased height may become necessary.
- During winters of exceptional snow cover, remove snow on either side the of the enclosure fence to prevent ingress and egress.
- Mitigate corrosion of perimeter fence structures by using noncorrosive fencing materials.
- Risk of disease epidemic or heavy parasite infections among domestic elk can be minimized by maintaining a reasonable domestic elk stocking rate in relation to the enclosure size, periodic removal of domestic elk manure from concentration areas, and development of a disease immunization and parasite treatment protocol as applicable to domestic elk. For the purposes of this EA, a "reasonable stocking rate" is defined under *EA Definitions*, Part II.

Cultural Resources

Mitigate impacts to cultural resources by stopping work in the area of any observed archeological artifact. Report discovery of historical objects to: Montana Historical Society, Historic Preservation Office, 1410 8th Avenue, P.O. Box 201202, Helena, Montana 59620, (406) 444-7715.

If work stoppage in the area containing observed artifacts is not possible, record the location and position of each object, take pictures and preserve the artifact(s).

ENVIRONMENTAL ASSESSMENT CHECKLIST

PART I. GAME FARM LICENSE APPLICATION

Montana Fish, Wildlife & Park's authority to regulate game farms is contained in sections 87-4-406 through 87-4-424, MCA and ARM 12.6.1501 through 12.6.1519.

1. **Name of Project:** Paradise Elk Ranch Game Farm

Date of Acceptance of Completed Application: August 25, 1997

2. **Name, Address and Phone Number of Applicant(s):**

Mark E. Ayers
149 Hole Brothers Road
P.O. Box 693
Cut Bank, Montana 59427

(406) 873-4587

3. **If Applicable:**

Estimated Construction/Commencement Date: upon license approval

Estimated Completion Date: within 90 days of license approval

Is this an application for expansion of existing facility or is a future expansion contemplated?

This is an application for a new facility.

4. **Location Affected by Proposed Action (county, range and township):**

Glacier County
SE ¼, NE ¼ of Section 8 Township 33 North, Range 5 West

5. **Project Size:** Estimate the number of acres that would be directly affected that are currently:

(a) Developed:	(d) Floodplain.....	acres
residential.....		acres
industrial.....	(e) Productive:	
	irrigated cropland.....	acres
(b) Open Space/Woodlands....	dry cropland.....	acres
	forestry.....	acres
	rangeland.....	22 acres
(c) Wetlands/Riparian Areas.....	other.....	acres

6. Map/site plan:

The following maps are included in the introductory summary of this EA:

Figure 1: Site Map Showing Land Ownership

Figure 2: Site Map Showing Land Use and Land Cover

Figure 3: Site Map Showing Big Game Winter Range

7. Narrative Summary of the Proposed Action for Project including the Benefits and Purpose of the Proposed Action:

The FWP received a completed application August 25, 1997 to develop a new game farm referred to as the Paradise Elk Ranch game farm. The proposed game farm is located approximately 2 miles east of Cut Bank, Montana (**Figure 1**).

The Proposed Action consists of placing up to 20 elk on 22 acres. The applicant may board domestic elk, not owned by the business, at the proposed game farm. No quarantine facility is planned for the proposed game farm. The quarantine plan for the proposed game farm consists of using the approved quarantine facility under a separate game farm operated by the applicant, located approximately 1½ miles from the proposed site. A handling facility and holding pen would be constructed on the site to facilitate the loading of animals when movement to the quarantine facility would be necessary. Transporting game farm animals from the proposed game farm to the quarantine facility would be performed in compliance with all Department of Livestock (DoL) transportation requirements.

The applicant proposes to provide a perimeter fence constructed with 12 gauge, 8-foot, 17 wire tight lock mesh with 6-inch vertical stays. Fence posts, including corner and brace posts, would be 2.37-inch structural steel tubing. Maximum spacing between posts would be 20 feet. All perimeter posts would be a minimum of 8 feet above ground and 4 feet underground. Cross fencing would be similar to the perimeter fence. The two exterior self-closing gates would be 10-foot wide by 8-foot high with 2.37-inch structural tubing framework and cross bars. A walk-in gate would be self-closing. Current FWP requirements (ARM 12.6.1503) are stated in **Appendix A**.

The proposed game farm property is owned by Mark E. Ayers. Mr. Ayers is a licensed game farm operator and owns his own elk. The applicant would live adjacent to the proposed game farm. The applicant would breed, sell, and dispose of domestic elk in accordance with Montana game farm and disease control requirements stipulated in Montana statute and administrative rules. Big game from the Paradise Elk Ranch game farm would be produced to supply market demand for breeding animals and antlers.

8. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction:

(a) Permits:

Agency Name	Permit	Approval Date and Number
Department of Livestock	approval of quarantine and handling facility	approval pending

(b) Funding:

Agency Name	Funding Amount
none	

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Agency Name	Type of Responsibility
Montana Department of Livestock	disease control
Montana Department of Environmental Quality (DEQ)	water quality, air quality waste management
Montana State Historical Preservation Office (SHPO)	cultural resources
Montana Department of Natural Resources and Conservation (DNRC)	water rights
Natural Resource Conservation Service (NRCS)	soil conservation
Glacier County Conservation District	stream crossings
U.S. Army Corps of Engineers (COE)	wetlands
Glacier County Weed Control District	weed control

9. List of Agencies Consulted During Preparation of the EA:

Montana Department of Livestock

Montana Department of Environmental Quality

Montana State Historical Preservation Office

Montana Bureau of Mines and Geology

Montana Department of Natural Resources and Conservation

U.S. Department of Agriculture, Natural Resource Conservation Service

Glacier County Conservation District

U.S. Forest Service

References:

Mark Ayers. 1997. Application For A New Game Farm completed August 25, 1997; Paradise Elk Ranch, 149 Hole Brothers Road, P.O. Box 693, Cut Bank, Montana.

PART II. ENVIRONMENTAL REVIEW

This section of the EA presents results of an environmental review of the Proposed Action. The assessment evaluated direct and indirect impacts and cumulative effects of the Proposed Action on the following resources of the physical environment: land, air, water, vegetation, fish and wildlife; and the following concerns of the human environment: noise, land use, human health risk, community impacts, public services and taxes, aesthetics and recreation, and cultural and historical resources. Impacts were determined to fall in one of four categories: unknown, none, minor and significant. For the purposes of this EA, and in accordance with ARM 12.2.429 through 12.2.431, these terms are defined below.

EA DEFINITIONS

Cumulative Effects: The collective impacts on the human environment of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impacts statement evaluation, or permit processing procedures.

Unknown Impacts: Information is not available to facilitate a reasonable prediction of potential impacts.

Significant Impacts: A determination of significance of an impact in this EA is based on individual and cumulative impacts from the Proposed Action. If the Proposed Action results in significant impacts that can not be effectively mitigated, FWP must prepare an EIS. The following criteria are considered in determining the significance of each impact on the quality of the human environment:

- severity, duration, geographic extent and frequency of occurrence of the impact;
- probability that the impact would occur if the Proposed Action occurs;
- growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative effects;
- quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources or values;
- importance to the state and to society of each environmental resource or value that would be affected;
- any precedent that would be set as a result of an impact of the Proposed Action that would commit FWP to future actions with significant impacts or a decision in principle about such future actions; and
- potential conflict with local, state, or federal laws, requirements, or formal plans.

Reasonable Stocking Rate: The density of animals appropriate to maintain vegetative cover in pasture condition that minimizes soil erosion from major precipitation events and snowmelt. A reasonable stocking rate on the proposed game farm site is 4 elk if full supplemental feed is provided for at least 6 months a year. The methodology for determining reasonable stocking rate is presented under the evaluation for *Vegetation Resources* in the Checklist EA of this document.

PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Soil instability or changes in geologic substructure?						
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?					Yes	1(a)
c. Destruction, covering or modification of any unique geologic or physical features?						
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?						

AFFECTED ENVIRONMENT:

The proposed Paradise game farm is located approximately two miles east of Cut Bank, Montana in Glacier County. The proposed 22 acre site is situated on the gently sloping, broad upland bench surrounding the city of Cut Bank. The area is part of the glaciated Missouri River plateau and exhibits typical glaciated topography of poorly drained pothole depressions and undulating terrain. Oil and gas have historically been produced in the vicinity and on the proposed game farm site, but production on the site is currently idle. The current land use is rangeland with no active livestock grazing.

Bedrock geology of the area is mapped as Upper Cretaceous Two Medicine Formation (U.S. Geologic Survey, 1955). The Two Medicine is primarily composed of gray shales with minor beds of sandstone. A small outcrop of grayish brown, medium to fine-grained sandstone is present on the proposed site. Surficial geology has been mapped as glacial lake deposits that accumulated at the bottom of glacial lake Cut Bank (Zimmerman, 1967).

Three soil map units are identified on the property in the soil survey of the area compiled by the Soil Conservation Service (U.S. Department of Agriculture, 1980). These three units are the Wayden clay loam, Scobey clay loam, and Linnet clay. The Wayden clay loam consists of shallow excessively drained soils on uplands and is present on about 50% of the proposed game farm area. This soil unit develops in shale parent material and has a surface layer about six inches thick that is a grayish brown clay loam. Bedrock is shallow below this soil, generally at a depth of 10 to 20 inches. The permeability in the Wayden is slow, soil reaction is mildly to moderately alkaline, and shrink-swell potential is moderate to high. The hazard of soil blowing is severe and the hazard of water erosion is moderate.

Scobey clay loam is present on a third of the property along the east perimeter. The Scobey soil forms in clay loam glacial till with a gray clay loam surface layer about three inches thick and a grayish brown and brown subsoil and substratum layer that is greater than 60 inches thick. Permeability is moderately slow and the soil is mildly to moderately alkaline. The hazard of wind erosion is slight and the hazard of water erosion is moderate.

The Linnet clay is present on the remainder of the proposed property along the northern perimeter. Linnet soils are deep, well drained soils formed in alluvium or glacial till. The surface layer is grayish brown and dark grayish brown clay about three inches thick with the subsoil and substratum similar in color and texture. Threads and nodules of white lime are noted in the substratum. The permeability of the soil is slow and runoff is medium. The soil reaction is mildly alkaline in the surface and subsoil but strongly alkaline below a depth of 54 inches. The hazard of water and wind erosion is moderate.

PROPOSED ACTION:

1(b) Impacts to land resources associated with the Proposed Action are expected to be minor if a reasonable stocking rate is used. Wind erosion hazard is severe on about half of the property where Wayden soils are present. The loss of soil due to wind erosion can be reduced or eliminated by maintaining an effective vegetative cover, which is directly impacted by the stocking rate. The risk of water erosion is slight to moderate on all the property and is less likely to be a problem as a result of the gentle slopes on the proposed site.

Soil compaction may be of concern in animal concentration areas where high densities of animals result in the typical bare ground condition common to feed lot situations. Maintaining an adequate vegetative cover should effectively mitigate this impact.

NO ACTION:

The No Action Alternative would not affect the current condition of the property if the owners continue to use the property as idle rangeland. If future uses included livestock grazing, the No Action Alternative could have similar impacts to land resources as the Proposed Action.

CUMULATIVE EFFECTS:

The cumulative effect of using the proposed area as a game farm would be negligible. The proposed game farm does not contain any unique or significant soil or land resources.

COMMENTS:

The moderate to strong alkalinity of the soil results in a high risk of corrosion to uncoated steel. This characteristic should be considered when designing the game farm fence.

Required Stipulations: None.

Recommended Mitigation Measures:

Maintain a reasonable stocking rate within the game farm enclosure to minimize changes in soil structure, minimize potential increases in runoff and minimize water and wind erosion from disturbed ground.

REFERENCES:

U.S. Department of Agriculture, Soil Conservation Service and U.S. Department of the Interior, Bureau of Indian Affairs in cooperation with Montana Agricultural Experiment Station. 1980. Soil Survey of Glacier County Area and Part of Pondera County, Montana. March. 167 pages with plates and tables.

U.S. Geologic Survey and Montana Bureau of Mines and Geology, 1955. Geologic Map of Montana, 1:500,000.

Zimmerman, Everett A. 1967. Water Resources of the Cut Bank Area, Glacier and Toole Counties, Montana. Montana Bureau of Mines and Geology in cooperation with the U.S. Geological Survey. Bulletin 60. May, 37 pages with plates.

PHYSICAL ENVIRONMENT

2. AIR Would the proposed action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Emission of air pollutants or deterioration of ambient air quality?					Yes	2(a)
b. Creation of objectionable odors?					Yes	2(b)
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?						
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?						

AFFECTED ENVIRONMENT:

The proposed game farm site is situated on an upland bench, two miles east of the town of Cut Bank. The site is accessed off a dirt road within a low-density residential area. This area is sparsely populated with no apparent air quality problems. This area is not classified for air quality attainment status (MDEQ 1997).

The climate of the Cut Bank area is semi-arid. Normal annual precipitation is 11.5 inches. About half the annual precipitation falls during May, June and July. These months are the main growing season for the region. Protracted period of below-normal precipitation deplete soil moisture, curtail runoff, and cause groundwater levels to lower for lack of recharge and because of increased use.

Temperature extremes are great and range from 107°F to -47°F. The average frost-free season is 116 days between May 23 and September 17. Evaporation, aided by moderate to strong winds, is about 50 inches per year.

PROPOSED ACTION:

- 2(a) Impacts to air quality from fence construction and road use may result in short-term minor increases in particulate matter in ambient air.
- 2(b) Odor problems may result from waste management practices in areas where elk concentrate to feed. Approximately eight other residents occupying property within a 1-mile radius of the proposed game farm.

NO ACTION:

No impacts to air quality are expected to result from the No Action Alternative.

CUMULATIVE EFFECTS:

No additional impacts from past, present or reasonably foreseeable activities near the proposed game farm are anticipated.

COMMENTS:

Dust and odor are not expected to be of significant concern at the proposed game farm site due to the sparse population in this area. If dust and/or odor problems arise, mitigation measures can be implemented.

Required Stipulations: None.

Recommended Mitigation Measures:

- 2(a) Implement dust management activities including spraying water on unpaved roads during the dry season, vegetating exposed ground where possible, protecting fill piles from wind erosion, and limiting ground disturbance to only the area necessary to complete the job.
- 2(b) Employ the following best management practices (BMPs) to reduce odor problems if they occur: (1) if waste is land-applied, incorporate waste into soil quickly by plowing or discing; (2) spread waste during cool weather or in the morning during warm, dry weather; and (3) cover buried animal carcasses on the game farm with a minimum of 2 feet of soil; carcasses may also be sent to a licensed municipal landfill if approved by the landfill operator; carcasses should not be disposed of in or adjacent to water bodies, roads, and ditches. These and other BMPs are described in "Guide to Animal Waste Management and Water Quality Protection in Montana" (DEQ 1996).

REFERENCES:

- Montana Department of Environmental Quality (DEQ), 1996.** Guide to Animal Waste Management and Water Quality Protection in Montana. Helena, MT.
- Montana Department of Environmental Quality (DEQ), 1997.** Montana Air Quality Non-attainment Areas. Revised January, 1997.
- Zimmerman, Everett A. 1967.** Water Resources of the Cut Bank Area, Glacier and Toole Counties, Montana. Montana Bureau of Mines and Geology in cooperation with the U.S. Geological Survey. Bulletin 60. May, 37 pages with plates.

PHYSICAL ENVIRONMENT

3. WATER RESOURCES Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?						
b. Changes in drainage patterns or the rate and amount of surface runoff?						
c. Alteration of the course or magnitude of flood water or other flows?						
d. Changes in the amount of surface water in any water body or creation of a new water body?						
e. Exposure of people or property to water related hazards such as flooding?						
f. Changes in the quality of groundwater?					Yes	3(f)
g. Changes in the quantity of groundwater?						
h. Increase in risk of contamination of surface or groundwater?					Yes	3(f)
i. Violation of the Montana non-degradation statute?						
j. Effects on any existing water right or reservation?						
k. Effects on other water users as a result of any alteration in surface or groundwater quality?						
l. Effects on other water users as a result of any alteration in surface or groundwater quantity?						

AFFECTED ENVIRONMENT:

The major drainage in the area is Cut Bank Creek which is the principal tributary to the Marias River approximately 12 miles south of Cut Bank. The main tributaries to Cut Bank Creek are Spring Creek, Snake Coulee, Rocky Coulee, and Little Rocky Coulee. Only Cut Bank Creek and Snake Coulee fall within the study area shown as Figure 1. The Proposed Action would be located approximately 3 miles east (cross-gradient) of Cut Bank Creek, and approximately 1.5 miles southeast (ungradient) of Snake Coulee (**Figure 1**). Drainage is poorly developed throughout the region. Small undrained depressions as intermittent potholes are numerous throughout the area (Zimmerman 1967). Cut Bank Creek, which drains an area of 1,065 square miles, originates in the mountains of Glacier National Park. Much of the

spring and summer flow is derived from melting snow; fall and winter flow is sustained by groundwater discharge (Zimmerman 1967). The average discharge at Cut Bank for the period of record 1905 - 1995 is 185 cubic feet per second (cfs) (Shields, et al. 1996). Maximum discharge recorded was 11,200 cfs in spring 1964; a minimum of 1 cfs was recorded in January 1982 (USGS 1996). Snake Coulee, an intermittent stream that discharges to Cut Bank Creek about 1 mile north (upstream) of the town of Cut Bank, typically discharges approximately 2 cfs (Zimmerman 1967).

The proposed 22 acre site is situated on a gently sloping, broad upland bench in the Cut Bank Creek watershed. The proposed site is located on a relatively flat area in the drainage basin of Snake Coulee (Figure 1). An ephemeral drainage swale is located approximately 100 feet southwest of the proposed site (Figure 2). No drainage swale or pothole is located on the proposed site. On-site water is provided by the Cut Bank water supply system (Ayers 1997, McAdams 1997) and a single irrigation well (Ayers 1997).

Drinking water for the City of Cut Bank and the proposed game farm site is provided by water withdrawn from Cut Bank Creek (McAdams 1997). Most of the property outside of the City of Cut Bank uses groundwater as the principal source of fresh water for domestic, stock and industrial supplies (Zimmerman 1967).

Groundwater wells in the Cut Bank watershed produce from 5 aquifers (lower to upper): Madison Limestone, Virgelle Sandstone, Medicine Hat Formation, Pleistocene terrace deposits and alluvium. Pleistocene terrace deposits and alluvial aquifers are limited in extent and provide near-surface water typically used for domestic and stock watering purposes. The Madison aquifer in the area is deep and was used as the source of most of the water used for oil-field water flood operations. The Two Medicine Formation and Virgelle Sandstone are the most widely used aquifers in the area. Well yields from these aquifers range from 10 gallons per minute (gpm) in the Two Medicine to as much as 250 gpm from the Virgelle (Zimmerman 1967).

There are 4 groundwater wells located within ½-mile of the proposed game farm site, and an additional 8 groundwater wells within 1 mile of the site. None of these wells produce from aquifers at 150 - 220 feet below ground surface, and 3 from aquifers at 50 - 125 feet below ground surface. Production rates range from 10 - 400 gallons per minute. Most of the 12 wells produce about 25 gallons per minute and are used for domestic, stock, and irrigation purposes.

PROPOSED ACTION:

- 3(f) Domestic elk fecal matter and nutrient-enriched water could affect the quality of groundwater and surface water in the vicinity of the game farm, primarily during periods of snowmelt and major precipitation events.

NO ACTION:

Current hydrologic conditions are not expected to change under the No Action Alternative.

CUMULATIVE EFFECTS:

Snake Coulee is not listed as an impaired stream by the Department of Environmental Quality for Total Maximum Daily Load (TMDL). Cut Bank Creek is considered an impaired waterbody for aquatic life support, cold water fishery, drinking water and recreation (DEQ 1996). The Department of Environmental Quality has determined that the probable cause of the impairment is flow alternation, nutrients, salinity, siltation and thermal modifications. The probable source of impairment is agriculture, crop production, natural sources, and range land (DEQ 1996). Because the Proposed Action is located

in an area that does not directly discharge to surface water, its contribution to the cumulative effects of agriculture, crop production, natural sources, and range land uses as probable sources of waterbody Creek impairment is expected to be minor to none.

COMMENTS:

Required Stipulations: None.

Recommended Mitigation Measures:

Maintain vegetative cover in the pastures to mitigate sediment and contaminant entrainment in surface water runoff.

REFERENCES:

Ayers, Mark. 1997. Personal communication with Mark Ayers, game farm applicant and Alice Stanley, Maxim Technologies. September 1997.

McAdams, Martha. 1997. Personal communication with Martha McAdams, City of Cut Bank and Alice Stanley, Maxim Technologies. October 9, 1997.

Montana Bureau of Mines and Geology (MBMG), 1997. Computer file search of well logs. Butte MBMG office. September 1997.

Montana Department of Environmental Quality (DEQ), 1996. Guide to Animal Waste Management and Water Quality Protection in Montana. Helena, MT.

_____, 1996. Database of Montana Impaired Water Bodies compiled by the DEQ Total Maximum Daily Load Program. 1996.

Montana Department of Health and Environmental Sciences (DHES), 1994. Common Sense and Water Quality, A Handbook for Livestock Producers. Water Quality Division. Helena, MT.

Montana Department of Natural Resources and Conservation (DNRC), 1997. Computer file search of water rights. Helena DNRC field office. June 1997.

Shields, R.R., White, M.K., Ladd P.B., and Chambers, C.L. 1996. Water Resources Data, Montana Water Year 1995. U.S. Geological Survey Water Data Report MT-95-1.

Zimmerman, Everett A. 1967. Water Resources of the Cut Bank Area, Glacier and Toole Counties, Montana. Montana Bureau of Mines and Geology in cooperation with the U.S. Geological Survey. Bulletin 60. May, 37 pages with plates.

PHYSICAL ENVIRONMENT

4. VEGETATION Would the proposed action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Changes in the diversity, productivity or abundance of plant species?					Yes	4(a)
b. Alteration of a plant community?					Yes	4(a)
c. Adverse effects on any unique, rare, threatened, or endangered species?						4(c)
d. Reduction in acreage or productivity of any agricultural land?					Yes	4(a)
e. Establishment or spread of noxious weeds?					Yes	4(e)

AFFECTED ENVIRONMENT:

The proposed game farm includes one vegetation type; bluebunch wheatgrass/western wheatgrass. The site has historically been heavily grazed (Ayers 1997). Historic overgrazing has resulted in a patchwork of introduced and native species and the elimination of bluebunch wheatgrass from the site. The site is characterized by 2- to 3-acre areas dominated by western wheatgrass, with lesser amounts of scarlet globemallow, prairie junegrass, thickspike wheatgrass, crested wheatgrass, hairy goldenaster, saltsage, and very sparse green needlegrass. Smaller areas are dominated by blue grama and needle-and-thread, with lesser amounts of curlycup gumweed, fringed sagewort, Hood's phlox, dotted blazingstar, and broom snakeweed. Small monocultures of smooth brome, tumbled mustard or crested wheatgrass are also present on the site. One acre had recently been seeded to smooth brome and dryland alfalfa (Ayers 1997). The proposed pasture is estimated to produce approximately 7 tons/year of available forage.

The site conforms to the description by Mueggler and Stewart (1977) of this habitat type in a heavily grazed condition (i.e. reduction or elimination of bluebunch wheatgrass and green needlegrass, and short term increase of western wheatgrass and thickspike wheatgrass, with patchy blue grama and needle-and-thread).

A four pasture configuration would be used, with one pasture encompassing approximately half the proposed acreage, and the other three pastures/pens utilizing the remaining acres. Elk would be rotated through the pastures as needed to maintain existing vegetation (Ayers 1997).

PROPOSED ACTION:

4(a) The Proposed Action would put up to 20 elk on 22 acres. Based on forage production values from the Soil Conservation Service range site data (USDA 1972), forage production on the proposed site is adequate to provide feed for 4 adult elk 6 months of the year and maintain vegetative cover from year to year. This density of elk is considered a reasonable stocking rate if no supplemental feed were provided for 6 months of the year, and full supplemental feed were provided for 6 months of the year.

The reasonable stocking rate is determined by calculating the number of game farm animals a pasture can support without supplemental feed. This is derived by dividing the annual sustainable forage supply by the amount of hay one animal will consume in one year. Sustainable forage supply is assumed to be ½ of available forage supply which is a factor of pasture or range

condition and forage species. The forage demand is the product of average daily forage demand for one elk (11 pounds/elk/day) X 365 days.

The annual sustainable forage supply for the proposed Paradise pasture is estimated at 3.5 tons/year. The amount of forage one animal will consume in one year (11 pounds/day/elk X 365 days/year) is 1.8 tons/elk/year. The number of elk the pasture could support for one year without supplemental feed is 3.5 tons/year divided by 1.8 tons/elk/year = 2 elk. In the case of the Paradise game farm, the proposed pasture could support 2 elk for one year without supplemental feed, or, more practically, up to 4 elk for six months.

If the applicant rotates elk through pastures in a timely manner, provides supplemental feed throughout the year, and encourages forage production through irrigation and fertilization, the estimated reasonable stocking rate would increase. However, if 20 elk are managed on the proposed pasture, vegetation and soil resources would be expected to degrade and result in a decrease in vegetative productivity, changes in species composition, and a reduction in native species diversity.

- 4(c) Based on a reconnaissance survey of the tract on September 23, 1997, a history of overgrazing, and a search of the Montana Natural Heritage Program files, there do not appear to be sensitive plant species within the proposed game farm (Montana National Heritage Program 1997).
- 4(e) No state listed noxious weeds were observed on the tract during the reconnaissance survey. Canada thistle is fairly ubiquitous in the area, and spotted knapweed and leafy spurge are moving in from the west and south (Lang 1997). Elk will eat spotted knapweed and graze it very short, but the knapweed would continue to flower and produce seed. Elk do not consume Canada thistle or leafy spurge as readily. If soils and vegetation are degraded on the tract, noxious weeds may become established.

NO ACTION:

The No Action Alternative would result in no change to existing vegetation in and around the proposed game farm.

CUMULATIVE EFFECTS:

The severity, duration, geographic extent, and frequency of occurrence of impacts from this particular game farm are negligible.

COMMENTS:

Required Stipulations: None.

Recommended Mitigation Measures:

Effects on vegetation from the Proposed Action can be mitigated by using the following mitigation measures.

- Stock elk at a rate which would preserve the vegetative resource and soil integrity over time. This rate is estimated to be 4 adult elk if supplemental feed is provided for at least 6 months of the year.
- Establish a rotational grazing system.

- Feed only hay produced locally, or certified weed seed free hay which would slow the introduction of noxious weeds not currently in the vicinity.
- If noxious weeds become established, develop a weed control plan in conjunction with the Glacier County Weed Control District.

REFERENCES:

Ayers, M. 1997. Owner of proposed game farm. Personal communication with Candace Durran, September 23, 1997.

Lang, L. Glacier County weed control supervisor. Personal communication with Candace Durran, October 7, 1997.

Montana Natural Heritage Program. 1997. Letter dated September 23, 1997. Montana Natural Heritage Program, Helena, MT.

Mueggler W., and W. Stewart. 1980. Grassland and Shrubland Habitat Types of Western Montana. USDA Forest Service, General Technical Report INT-66, Intermountain Forest and Range Experiment Station, Ogden, UT. 154pp.

USDA Soil Conservation Service. 1972. Soil survey of Glacier Country area and part of Pondera County Montana, USDA SCS, Cut Bank, Montana. 161 pp.

PHYSICAL ENVIRONMENT

5. <u>FISH/WILDLIFE</u> Would the proposed action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Deterioration of critical fish or wildlife habitat?						
b. Changes in the diversity or abundance of game species?						
c. Changes in the diversity or abundance of nongame species?						
d. Introduction of new species into an area?						
e. Creation of a barrier to the migration or movement of animals?					Yes	5(e)
f. Adverse effects on any unique, rare, threatened, or endangered species?						
g. Increase in conditions that stress wildlife populations or limit abundance including harassment, legal or illegal harvest or other human activity)?						
h. Increased risk of contact between game farm animals and wild game?					Yes	5(h)
i. Increased risk to wildlife health from disease?					Yes	5(h)

AFFECTED ENVIRONMENT:

The proposed game farm is located in prairie grassland habitat in north-central Montana and is comprised of 22 acres of grassland habitat (**Figure 2**). Approximately a quarter of this area has been planted to introduced grasses. The proposed game farm site is presently idle land but had previously been used to pasture horses. There are no riparian areas or wetland sites located on the proposed game farm. The proposed game farm is surrounded by dryland agricultural fields. An occasional mule deer, white-tailed deer, or pronghorn antelope may pass through this area but the area does not provide sufficient habitat to sustain significant numbers of these species (Olson 1997). It is also highly unlikely that transient elk pass through this area (Olson 1997). There are no areas of concentrated winter deer use on or near the proposed game farm (**Figure 3**). Hungarian partridge and ring-necked pheasants, two introduced species, do occur in the vicinity of the proposed game farm. There are no Federally listed threatened and endangered wildlife species expect to occur in this area.

The Proposed Action plans to place up to 20 domestic elk on approximately 22 acres of land. A small portion (1-2 acres) of the proposed game farm would be sprinkle irrigated from a domestic well located on site. Water for consumption by elk would come from water supplied from the city of Cut Bank. The quarantine facility for the proposed game farm would be located at an existing game farm approximately two road miles away.

PROPOSED ACTION:

5(e) The 22-acre enclosure may alter local movement of some individual wild deer or pronghorn forcing them to reroute their movement around the exterior enclosure fence. However, the proposed game farm is sufficiently small and located on nearly level land that it would have minimal affect.

5(h) There is an undetermined potential of domestic elk carrying or becoming infected with a contagious wildlife disease or parasite such as tuberculosis or meningeal worm, and then coming in contact (through-the-fence, nose-to-nose, nose-to-soil, or ingress/egress) with wild deer, elk, or other wildlife. It is also possible that diseases and parasites carried by wild elk could be introduced to domestic elk with equally severe impacts. Ingress of wild elk or deer would likely result in the destruction of the trespassing animals. Spread of a contagious wildlife disease may directly or indirectly (depending upon the nature of the disease) effect the human environment by reducing the number of wild deer and elk available for hunting or exposing hunters to diseases that are contagious to humans as well. Although release of a contagious disease in the wild could severely impact native wildlife populations, the risk of disease transmission from domestic elk to wild elk is very low and can be minimized by routine disease surveillance of the herd.

This analysis assumes that all domestic elk entering the enclosure have been genetically screened or otherwise certified that they do not carry red deer genes. If not, there is a risk that ingress/egress may lead to genetic pollution of the wild elk population.

Brucellosis and tuberculosis are potentially transmittable from elk to cattle and livestock and wildlife. The risk of disease being passed from domestic elk to domestic livestock would be minimal if the fence integrity is maintained and appropriate mitigation measures are followed. The potential for disease transmission to domestic livestock and wildlife from game farm animals can be also be mitigated through Department of Livestock disease testing requirements. All animals placed on this game farm would be required to be tested for tuberculosis at the time of import, purchase and/or transportation to the game farm. A test for brucellosis is required for all Cervids that are sold or moved within the state, and is required for all game farm animals imported into Montana. Each game farm is required to have an isolation pen (quarantine facility) on the game farm to isolate any animals that are imported or become ill. The state veterinarian can require additional testing and place herds under strict quarantine should problems arise. Routine brucellosis and tuberculosis testing requirements for game farm animals offer a measure of surveillance that minimizes that risk. Failure to comply with these requirements is grounds for license revocation.

NO ACTION:

No wildlife related impacts are expected to occur under the No Action Alternative. The proposed game farm site would continue to be grazed by domestic livestock under the No Action Alternative.

CUMULATIVE EFFECTS:

The fencing of 22 acres of rangeland would not result cumulative impacts to wildlife in this area. Although grassland prairie in this specific area has been converted to agricultural crops, the intensive grazing of 22 acres of grass lands would not be a significant cumulative factor.

COMMENTS:

Required Stipulations:

Report the ingress of any wild game animals or egress of domestic elk to FWP immediately. The report must contain the probable reason why or how ingress/egress was achieved. This stipulation is imposed to mitigate risk to wildlife health posed by the proposed game farm expansion.

Information provided by the stipulation would help both the applicant and FWP to address ingress and egress incidents and to minimize contact between wild and domestic animals. This stipulation, in addition to existing FWP fencing and wildlife protection requirements, would reduce the risk to wildlife health.

Recommended Mitigation Measures:

The following standard game farm management practices would help to minimize impacts to free ranging wildlife species. Implementation of these practices is highly recommended and should be considered a form of mitigation.

- Store hay, feed, and salt away from exterior fences or buildings.
- Feed game farm animals at interior portions of the enclosure and not along the perimeter fence.
- Remove dead animals, excess fecal material, and waste feed from the game farm and place at an approved site not likely to be used by humans, and domestic animals and wild animals.
- Inspect the exterior game farm fence on a regular basis and immediately after events likely to damage the fence to insure its integrity with respect to trees, burrowing animals, predators and other game animals.
- If fence integrity or ingress/egress becomes a problem, adjustment of fence requirements to include double fencing or increased height may become necessary.
- During winters of exceptional snow cover, remove snow on either side the of the enclosure fence to maintain an 8-foot fence height to prevent ingress and egress.
- Mitigate corrosion of perimeter fence structures by using coated steel or wood fence posts, coated bottom wire, and sulfate-resistant concrete.
- Risk of disease epidemic or heavy parasite infections among domestic elk can be minimized by maintaining a reasonable domestic elk stocking rate in relation to the enclosure size, periodic removal of domestic elk manure from concentration areas, and development of a disease immunization and parasite treatment protocol as applicable to domestic elk.

REFERENCES:

Olson, Gary, Biologist MT Dept. Fish, Wildlife and Parks, personal communication with Dr. Craig Knowles, Fauna West Wildlife Consultants, October 1997.

HUMAN ENVIRONMENT

6. NOISE EFFECTS Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Increases in existing noise levels?					Yes	6(a)
b. Exposure of people to severe or nuisance noise levels?						

AFFECTED ENVIRONMENT:

Little noise occurs in the general game farm area since the area is sparsely populated. Eight residences are present within an approximate one-mile radius of the proposed game farm site. There is a lack of other activities in the area that would generate noise.

PROPOSED ACTION:

6(a) The Proposed Action would result in a minor short-term increase in existing noise levels from fence construction, land clearing, and other activities conducted to develop the game farm.

NO ACTION:

No impacts to existing noise levels are expected from the No Action Alternative.

CUMULATIVE EFFECTS:

No additional impacts from past, present or reasonably foreseeable activities near the proposed game farm are anticipated.

COMMENTS:

Due to the low-density population in the area, noise generated from the game farm operation should not cause a problem. If noise concerns are raised, mitigation measures can be employed.

Required Stipulations: None.

Recommended Mitigation Measures:

6(a) Impacts to neighbors from construction noise can be reduced by limiting noisy activities to daylight hours and completing construction as soon as possible.

HUMAN ENVIRONMENT

7. <u>LAND USE</u> Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?						
b. Conflict with a designated natural area or area of unusual scientific or educational importance?						
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the Proposed Action?						
d. Conflict with any existing land use that would be adversely affected by the Proposed Action?						
e. Adverse effects on or relocation of residences?						

AFFECTED ENVIRONMENT:

Land use in the vicinity of the proposed game farm site is rangeland with some residential use. Oil field activity occurs within ½-mile of the site and an inactive oil well is present on the site. The area is not zoned for a specific use (Yaegley 1997). Questionnaires were sent to adjacent property owners to determine concerns of nearby residents. Two property owners responded and indicated they believed the proposed game farm was consistent with other land uses in the area.

PROPOSED ACTION:

The proposed game farm would be consistent with existing land uses. The use of the proposed game farm area for an elk farm may increase the value of the land.

NO ACTION:

If the proposed game farm area is not developed, use of the site would likely continue for pasture.

CUMULATIVE EFFECTS:

Land use described in the Proposed Action is consistent with existing land use in the vicinity of the proposed game farm area. Because no proposals or applications for future development in the vicinity of the proposed game farm are currently on file with Glacier County, and no past or present activities have adversely affected the game farm area, no potential cumulative effects on land use from the Proposed Action and past, present and reasonably foreseeable actions to land use are anticipated.

COMMENTS:

Because impacts to land use are none to potentially positive, no mitigation measures are recommended.

REFERENCES:

Yaegley, Jim. Glacier County Planner. personal communication with Holly Kuder, Maxim Technologies, September 10, 1997.

HUMAN ENVIRONMENT

8. <u>RISK/HEALTH HAZARDS</u> Would the proposed action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Risk of dispersal of hazardous substances (including, but not limited to chemicals, pathogens, or radiation) in the event of an accident or other forms of disruption?						
b. Creation of any hazard or potential hazard to domestic livestock?					Yes	8(b)
c. Creation of any hazard or potential hazard to human health?					Yes	8(c)

PROPOSED ACTION:

8(b) Brucellosis and tuberculosis are potentially transmittable from elk to cattle and cattle to elk. The risk of disease being passed from domestic elk to domestic livestock would be minimal if the fence integrity is maintained and appropriate mitigation measures are followed. The potential for disease transmission to domestic livestock from game farm animals is also mitigated through Department of Livestock disease testing requirements. All animals placed on this game farm would be required to be tested for tuberculosis at the time of import, purchase and/or transportation to the game farm. A test for brucellosis is required for all Cervids that are sold or moved within the state, and is required for all game farm animals imported into Montana. Each game farm is required to have an isolation pen (quarantine facility) on the game farm to isolate any animals that are imported or become ill. The state veterinarian can require additional testing and place herds under strict quarantine should problems arise.

8(c) If tuberculosis or brucellosis were to be transmitted from domestic elk to wild elk and deer, hunters field dressing wild elk and deer would be subject to some risk of infection. Veterinarians and meat cutters working with diseased game farm animals are at risk of becoming infected with brucellosis or tuberculosis. Risk to human health from diseased animals could be significant. Spread of a contagious wildlife disease may directly or indirectly (depending upon the nature of the disease) effect the human environment by reducing the number of wild deer available for hunting or exposing hunters to diseases that are contagious to humans as well.

NO ACTION:

No impact to human health would be expected to occur as a result of the No Action Alternative.

CUMULATIVE EFFECTS:

No past or present activities have adversely affected the game farm area, no potential cumulative effects on land use beyond those described under the Proposed Action are anticipated.

COMMENTS:

Required Stipulations: None.

Recommended Mitigation Measures:

The game farm mitigation measures listed in Section 5 (Fish and Wildlife) of this EA are applicable to this section.

HUMAN ENVIRONMENT

9. COMMUNITY IMPACT Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?						
b. Alteration of the social structure of a community?						
c. Alteration of the level or distribution of employment or community or personal income?						
d. Changes in industrial or commercial activity?						
e. Changes in historic or traditional recreational use of an area?						
f. Changes in existing public benefits provided by affected wildlife populations and wildlife habitats (educational, cultural or historic)?						
g. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?						9(g)

AFFECTED ENVIRONMENT:

The proposed game farm would be located in a rural area adjacent to farm land and residences. The nearest town to the proposed game farm site is Cut Bank, Montana, located approximately two miles to the west (Figure 1).

PROPOSED ACTION:

No adverse impacts to the community are expected from the proposed game farm. No employees would be hired as a result of the Proposed Action. While the Proposed Action may increase the income level for the applicant and increase taxes paid to the county, these increases would be relatively minor with respect to the community. The game farm may provide educational opportunities for local schoolchildren.

9(g) One adjacent property owner responding to a questionnaire indicated that the proposed game farm would increase traffic in the area due to people wanting to see the elk. Wild elk do not utilize the area around the proposed game farm site.

NO ACTION:

No adverse impacts to the community would result from the No Action Alternative.

CUMULATIVE EFFECTS:

No adverse impacts to the community are expected to result from the Proposed Action and past, present and reasonably foreseeable activities in the vicinity of the proposed game farm.

COMMENTS:

No mitigation measures are recommended with respect to community impacts.

HUMAN ENVIRONMENT

10. <u>PUBLIC SERVICES & TAXES</u> Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. A need for new or altered government services (specifically an increased regulatory role for FWP and Dept. of Livestock)?						10(a)
b. A change in the local or state tax base and revenues?						10(b)
c. A need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?						

PROPOSED ACTION:

- 10(a) FWP and DoL would be required to have an increased work load associated with the game farm for fence and animal inspections and monitoring. For the Proposed Action, the increase in use of agency resources is expected to cost the State of Montana \$7,000 - \$9,000 for the initial licensing process, and an additional \$1,200 per year for monitoring and administrative activities.
- 10(b) Placement of elk would increase the annual tax contribution of the proposed game farm, with collected taxes going toward the county general fund and local school district and a per capita tax that goes to the DoL. According to the Glacier County Assessor's Office, elk are taxed at the same rate as purebred cattle. Estimated annual taxes due to Glacier County from the proposed game farm would be between \$6 and \$12 per head, depending on the sex of the elk. According to DoL, the per capita tax is \$12 per head for game farm animals compared to \$1.20 per head for cattle (Schultz 1997).

NO ACTION:

No additional taxes would be collected from the applicant under the No Action Alternative. The applicant may continue to lease pasture for cattle grazing in the proposed game farm area.

CUMULATIVE EFFECTS:

No adverse cumulative effects to public services, taxes, and utilities are anticipated to result from the Proposed Action and past, present and reasonably foreseeable activities in the vicinity of the proposed game farm.

COMMENTS:

No mitigation measures are recommended with respect to public services, taxes, and utilities.

REFERENCES:

Glacier County Assessor's Office. Personal communication with H. Kuder, Maxim Technologies, Inc. September 12, 1997.

Schultz, Luella. 1997. Department of Livestock, Animal Health Division. Memorandum to Alice Stanley, Maxim Technologies. October 27, 1997.



HUMAN ENVIRONMENT

11. AESTHETICS/RECREATION Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?						
b. Alteration of the aesthetic character of a community or neighborhood?						
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings?						

AFFECTED ENVIRONMENT:

The game farm site is located two miles from the town of Cut Bank, in an area where elk are not typically seen. The property is surrounded on all sides by privately-owned land.

PROPOSED ACTION:

No adverse impacts to the public view, character of the neighborhood, or recreational opportunities in the area would result from the Proposed Action.

NO ACTION:

No adverse impacts to aesthetics or recreational opportunities in the area would result from the No Action Alternative.

CUMULATIVE EFFECTS:

No additional impacts from past, present and reasonably foreseeable activities near the proposed game farm are anticipated.

COMMENTS:

No mitigation measures are recommended with respect to aesthetics and recreation.

HUMAN ENVIRONMENT

12. <u>CULTURAL & HISTORICAL RESOURCES</u> Would Proposed Action result in:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?					Yes	12(a)
b. Physical change that would affect unique cultural values?						
c. Effects on existing religious or sacred uses of a site or area?						

AFFECTED ENVIRONMENT:

No historic sites are recorded on the proposed game farm based on a cultural resource file search by the State Historical Preservation Office (SHPO 1997).

PROPOSED ACTION:

12(a) According to SHPO (1997), there is a low likelihood for this project to affect unknown or unrecorded cultural properties.

NO ACTION:

No impacts to unknown cultural resources are expected from the No Action Alternative unless other disturbances occur within the property.

CUMULATIVE EFFECTS:

No additional impacts from past, present and reasonably foreseeable activities near the proposed game farm are anticipated.

COMMENTS:

Required Stipulations: None.

Recommended Mitigation Measures:

12(a) If archeological artifacts are observed during construction of the game farm fence or from other activities, work should stop in the area and the discovery reported to: Montana Historical Society, Historic Preservation Office, 1410 8th Avenue; P.O. Box 201202, Helena, Montana 59620, (406) 444-7715.

If work stoppage in the area containing observed artifacts is not possible, record the location and position of each object, take photographs, and preserve the artifact(s).

REFERENCES:

Montana State Historic Preservation Office (SHPO), 1997. Letter from Phillip Melton (SHPO, Helena, MT) to Daphne Digrindakis (Maxim Technologies, Inc.), dated October 14, 1997.

SUMMARY EVALUATION OF SIGNIFICANCE

13. SUMMARY Would the Proposed Action, considered as a whole:	POTENTIAL IMPACT				CAN IMPACT BE MITIGATED	COMMENT INDEX
	UNKNOWN	NONE	MINOR	SIGNIFICANT		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)						
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?					Yes	13(b)
c. Potentially conflict with the substantive requirements or any local, state, or federal law, regulation, standard or formal plan?						
d. Establish a precedent or likelihood that future actions with significant environmental impacts would be proposed?						13(d)
e. Generate substantial debate or controversy about the nature of the impacts that would be created?					Yes	13(d)

PROPOSED ACTION:

- 13(b) There is an undetermined potential of domestic elk carrying or becoming infected with a contagious wildlife disease or parasite such as tuberculosis, chronic wasting disease, or meningeal worm and then coming in contact (through-the-fence, nose-to-nose, nose-to-soil, or ingress/egress) with wild deer or other wildlife. Release of a contagious disease in the wild could severely impact native wildlife populations. It is also possible that disease and parasites carried by wild deer could be introduced to domestic elk with equally severe impacts. Ingress of wild deer and pronghorn would likely result in the destruction of the trespassing animals.

Spread of a contagious wildlife disease may directly or indirectly (depending on the nature of the disease) affect the human environment by reducing the number of wild deer and elk available for hunting, or exposing hunters to diseases that are contagious to humans as well.

- 13(d) The nature of impacts to wildlife from elk game farms is currently under debate in Montana and other states. The following issues are of the greatest concern:

- Disease transmission from game farm elk to wildlife is possible if the game farm elk are diseased and have an opportunity to come into contact with wild elk or deer.
- Hybridization of Montana's game species resulting from the ingress/egress of animals on game farms.
- Potential for wild animals to ingress into the game farm. Ingressing elk and deer are generally killed, typically by FWP wardens, to prevent potential disease transmittal. Ingressing mountain lions and black bears may be immobilized and removed.
- Theft of wild animals for financial gain on game farms.

These issues are particularly controversial when game farms block migration routes or consume significant areas of land historically utilized by wild game. Inadequate perimeter fencing and fence monitoring on the part of the game farm operator can also lead to ingress and egress events and nose-to-nose contact between wild game and game farm animals. Because the proposed game farm area is too small to consume a significant portion of land utilized by wild game, the controversial nature of the Proposed Action is minor.

SUMMARY EVALUATION OF SIGNIFICANCE CRITERIA

- a. **Does the Proposed Action have impacts that are individually minor, but cumulatively considerable? (A project may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)**

No significant cumulative impacts are anticipated for game farm.

- b. **Does the Proposed Action involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?**

Yes. An unlikely, but extremely hazardous event should it occur, would be the spread of a disease or parasite from domestic elk to wild deer or pronghorn. The risk of this event occurring can be reduced by following the mitigation listed in Sections 5, and regular disease surveillance.

- c. **Description and analysis of reasonable alternatives (including the No Action Alternative) to the Proposed Action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:**

No Action Alternative: The No Action Alternative would avoid all potential impacts listed above. This site would likely be used to pasture cattle, sheep or horses should the No Action Alternative be selected. The No Action Alternative would not result in exclusion of wildlife from this site.

- d. **Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:**

This section provides an analysis of impacts to private property by proposed restrictions or stipulations in this EA as required under 75-1-201, MCA, and the Private Property Assessment Act, Chapter 462, Laws of Montana (1995). The analysis provided in this EA is conducted in accordance with implementation guidance issued by the Montana Legislative Services Division (EQC 1996). A completed checklist designed to assist state agencies in identifying and evaluating proposed agency actions, such as imposed stipulations, that may result in the taking or damaging of private property, is included in **Appendix B**. Mitigation measures described in this section address both minor and significant impacts. FWP would require stipulations to mitigate all potentially significant impacts from the Proposed Action. Most potential minor impacts from the Proposed Action are addressed as mitigation measures that are strongly recommended, but not required.

Required Stipulation

Report the ingress of any wild game animals and predators (i.e., bear, lion, and coyote) as well as egress of domestic elk to FWP immediately. The report must contain the probable reason why or how ingress/egress occurred.

Restriction on Private Property Use

This stipulation restricts the use of private property by effectively requiring that the proposed game farm expansion be monitored at least once every 24 hours for ingress or egress events. The stipulation is consonant with the current FWP requirement to report egress events immediately [ARM 12.6.1517(2)].

Alternatives

Do not report ingress and egress events to FWP immediately.

This stipulation would not adequately address the increased risk to wildlife health. Ingressing wild animals must be detected immediately to prevent contact with wild game after contact with game farm animals.

Benefits from Imposing the Stipulation

This stipulation is imposed to mitigate predicted risk to wildlife health posed by the proposed game farm. Information provided by the stipulation would help the applicant and FWP to address ingress and egress incidents and to minimize contact between wild and domestic animals. This stipulation, in addition to existing FWP fencing and wildlife protection requirements, would effectively reduce the risk to wildlife health.

Types of Expenditures the Stipulation Would Require

The stipulation to require 24-hour notice of ingress and egress events would not impose any additional expenditures beyond those necessary to immediately report egress events in accordance with ARM 12.6.1517(2).

Stipulation's Effect on Property Values

None.

PART III. NARRATIVE EVALUATION AND COMMENT

Wildlife use of the area and potential for through-the-fence contact with game farm animals (consider year-around use, traditional seasonal habitat use, and location of travel routes and migration corridors).

Through the fence contact: The proposed game farm is located in low density mule and white-tailed deer, and pronghorn habitat. These species would not be attracted to the game farm and there is very little chance of contact between domestic elk and wild ungulates. Transmission of disease or parasites may occur during nose-to-nose contact, nose-to-body contact, and by contacting vegetation and feces along the fence line. Disease transmission may occur from wild ungulates to domestic elk and from domestic elk to wild ungulates. Diseases such as tuberculosis are highly contagious and can be easily transmitted between domestic elk and wild ungulates. Tuberculosis can also be transmitted to humans and is a serious health risk. Double fencing can be used to prevent nose-to-nose contact between domestic elk and domestic livestock.

Risk of disease transmission can be reduced by maintaining the integrity of the enclosure fence, by maintaining a healthy domestic elk population, and by following the above listed mitigation recommendations. If the game farm is managed properly, the risk of disease transmission from domestic elk to wild ungulates would likely be minimal.

Potential for escape of game farm animals or ingress of wildlife (consider site-specific factors that could reduce the effectiveness of perimeter fences built to standards outlined in Rule 12.6.1503A, including steepness of terrain, winter snow depths/drifting, susceptibility of fences to flood damage, etc.).

Fence integrity: The proposed fence would consist of 8-foot high, 12 gauge, 17 wire, tight lock mesh with 6-inch stays; supported by 12-foot long, 2.37-inch diameter structural metal tubing, set 4 feet into the soil and spaced at 20-foot intervals. All exterior gates would be 2.37-inch diameter structural metal tubing with double locking devices. The proposed enclosure site is located on level prairie with excellent site potential for construction of an enclosure. There are no drainages (perennial or seasonal) in this area and flood and ice damage to the exterior fence is not anticipated.

The proposed enclosure site is located at an elevation of about 3,800 feet and the expected snow levels during normal winters would be under 12 inches. The proposed game farm has high potential for drifting during blizzards due to its open location. The development of significant drifts would be dependent upon storm characteristics and location of objects that would decrease the wind velocity (shelter belts, homes, parked vehicles etc.). Under these extreme conditions the height of the fence above compacted snow level may be sufficiently reduced to permit ingress of wild ungulates into the enclosure to gain access of supplemental feed. However, only a few wild deer and no wild elk would be expected to use this area during periods of major winter storms. Domestic elk may also be able to leave the enclosure during periods of excessive snow cover, and removal of snow drifts from the either side of the fence in drift prone areas may be necessary during winter.

Proportion (%) of the total habitat area currently used by wildlife that would be enclosed or otherwise impacted.

The enclosure would exclude resident wild mule and white-tailed deer, and pronghorn from only a minor portion (<1%) of the area they presently have access to. Similar habitat (isolated grasslands surrounded by agricultural land) found in the proposed game farm vicinity is widely available to deer and pronghorn in nearby areas. The enclosure of 23 acres of prairie grassland would not seriously effect wild deer or pronghorn population viability in this area.

PART IV. EA CONCLUSION

1. Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO

No. The appropriate level of analysis for the Proposed Action is an EA because:

- all impacts of the Proposed Action have been accurately identified in the EA; and
- all identified impacts would be minor.

2. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the Proposed Action, is the level of public involvement appropriate under the circumstances?

Upon completion of the Draft EA, a notice is sent to adjoining landowners, local newspapers, and other potentially affected interests, explaining the project and asking for input during a 21-day comment period which extends from November 17, 1997 until 5 pm December 8, 1997. The Draft EA is also available to the public from the FWP office in Great Falls at the address and phone listed below and in the *Introduction* section of this EA, and through the State Bulletin Board System during the public comment period.

Gary Benson, FWP Region 4 Warden Sergeant
4600 Giant Springs Road
Great Falls, Montana 59406
(406) 454-5840

3. Duration of comment period if any: 21 days

4. Name, title, address and phone number of the Person(s) Responsible for Preparing the EA:

Dept. of Fish, Wildlife and Parks

Gary Benson, FWP Region 4 Warden Sergeant
4600 Giant Springs Road
Great Falls, Montana 59406
(406) 454-5840

Gary Olson, FWP Region 4 Wildlife Biologist
4600 Giant Springs Road
Great Falls, Montana 59406
(406) 278-7033

Ron Duty, FWP Region 4 Game Warden
69 Spartan Manor Trailer Park
Conrad, Montana 59425
(406) 278-7033

Karen Zackheim, FWP Game Farm Coordinator
Enforcement Division
1420 E. Sixth Avenue
Helena, MT 59620

Maxim Technologies, Inc.

Daphne Digrindakis, EA Coordinator
Alice Stanley, Hydrologist
Mike Cormier, Soil Scientist
James Colgrove, GIS and Graphics
Holly Kuder, Data Acquisition

FaunaWest Wildlife Consultants

Craig Knowles, Wildlife Biologist

Other

Candace Durran, Vegetation Specialist

APPENDIX A

FISH, WILDLIFE AND PARKS FENCING REQUIREMENTS •

12.6.1503A FENCING REQUIREMENTS (1) After May 15, 1992, applicants for a game farm license must comply with the following fencing standards:

(a) Conventional perimeter fences must be, at a minimum, eight feet above ground level for their entire length. The bottom six feet must be mesh of sufficient size to prevent wild animals from entering and game farm animals from escaping. Supplemental wire required to attain a height of 8 feet may be smooth, barbed, or woven wire (at least 12 1/2 gauge) with strands spaced not more than six inches apart.

(b) Perimeter fences constructed of high tensile wire must be supported by a post or a stay at minimum intervals of 8 feet.

(c) Conventional perimeter fences must be at least 12 1/2 gauge woven wire, 14 1/2 gauge high-tensile woven wire, chain link, non-climbable woven fence, or other fence approved by the department of fish, wildlife, and parks.

(i) If the wire used is not a full 8 feet in height, it must be overlapped one row and securely fastened at every other vertical row or woven together with cable.

(d) Electrical fencing materials may be used on perimeter fences only as a supplement to conventional fencing materials.

(e) All gates in the perimeter fence must be self-closing, equipped with two locking devices and installed in locations that have been approved by the department of fish, wildlife, and parks. Double gates may be required at points in the perimeter fence subject to frequent vehicle traffic that is not related to operation of the game farm.

(f) Posts used in the perimeter fence must be:

(i) of material of sufficient strength to keep game farm animals securely contained and wild animals from entering;

(ii) extended at least 8 feet above ground level;

(iii) spaced no more than 24 feet apart with stays or supports at 8 foot intervals between the posts;

(iv) braced with wood or with suitable metal material properly set in concrete, at all corners.

(2) Game farm perimeter fences in place as of May 15, 1992 that comply with the previously existing 7 1/2 foot height requirement and have been found to be adequate are not subject to the requirements of this rule (1)(a) through (f).

(a) If fences do not comply with the previously existing 7 1/2 foot height requirement or when reconstruction or replacement of existing 7 1/2 perimeter fences becomes necessary, they shall be constructed to meet the fencing standards outlined in (1).

(3) All open topped enclosures holding game farm carnivores must meet the following requirements:

(a) a perimeter fence at least 8 feet in height constructed of at least 9 gauge woven wire chain link or solid material that cannot be destroyed by the species contained therein;

(b) the perimeter barrier must be supported by a post or a stay at 10 foot intervals;

(c) an overhang of barbed wire or electric wire installed at the top of the perimeter fence or other configuration that precludes escape;

(d) buried mesh wire (minimum 11 gauge) extending laterally 3 feet to the inside of the enclosure for the length of the perimeter fence (to prevent carnivores from digging under the fence and escaping);

(e) any trees or obstacles that would allow carnivores to exit or enter the enclosure must be removed.

(4) All cages holding game farm carnivores must be of sufficient size (height, length and width) to prevent overcrowding and allow exercise and must meet the following requirements:

(a) a cage top constructed of at least 11 gauge woven wire or chain link;

(b) a floor made of cement or concrete at least 3 inches thick into which metal fence posts are permanently secured or a floor that consists of chain link

or similar material that will preclude the animal digging through the floor to escape.

(5) Gates on carnivore enclosures and cages must be self-closing and have double locks.

(6) Gates are prohibited in fences that are shared in common by neighboring game farms.

(7) The fence must be maintained in a game-proof condition at all times to prevent animals from escaping from or entering the game farm premises. If game farm animals or wild animals do pass through, under, or over the fence to prevent continued passage. (History: Sec. 87-4-422 MCA; IMP, Secs. 87-4-409, 87-4-422 MCA; NEW, 1992 MAR p.1017, Eff. 5/15/92.)

APPENDIX B

PRIVATE PROPERTY ASSESSMENT CHECKLIST

PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST

The 54th Legislature enacted the Private Property Assessment Act, Chapter 462, Laws of Montana (1995). The intent of the legislation is to establish an orderly and consistent process by which state agencies evaluate their proposed actions under the "Takings Clauses" of the United States and Montana Constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation..."

The Private Property Assessment Act applies to proposed agency actions pertaining to land or water management or to some other environmental matter that, if adopted and enforced without compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.

The Montana State Attorney General's Office has developed guidelines for use by state agency to assess the impact of a proposed agency action on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency action has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act. For the purposes of this EA, the questions on this checklist refer to the following required stipulation(s):

Report the ingress of any wild game animals or egress of domestic elk to FWP immediately. The report must contain the probable reason why or how ingress/egress was achieved.

PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PRIVATE PROPERTY ASSESSMENT ACT?

YES	NO	
<u>X</u>	_____	1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
_____	<u>X</u>	2. Does the action result in either a permanent or indefinite physical occupation of private property?
_____	<u>X</u>	3. Does the action deprive the owner of all economically viable uses of the property?
_____	<u>X</u>	4. Does the action deny a fundamental attribute of ownership?
_____	<u>X</u>	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If the answer is NO , skip questions 5a and 5b and continue with question 6.]
_____	_____	5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
_____	_____	5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
_____	<u>X</u>	6. Does the action have a severe impact on the value of the property?
_____	<u>X</u>	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? [If the answer is NO , do not answer questions 7a-7c.]

**DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS
UNDER THE PRIVATE PROPERTY ASSESSMENT ACT?**

YES

NO

7a. Is the impact of government action direct, peculiar, and significant?

7b. Has government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?

7c. Has government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if **YES** is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if **NO** is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.

